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§ 341. **Botrychium Lunaria,** Sw.—This summer there has been a new station discovered for Botrychium Lunaria by Miss Laura Geddes. As it is some ten miles from the one I discovered on the Janesville road, June 17th, 1872, and there has never been any of it found in intermediate localities, we feel much delighted with the young lady's good fortune. We think it wiser not to give the exact habitat, as it is getting uprooted from the old one. Many of the specimens from Miss Geddes' station have the segments placed more closely together than in those I found, looking more like my Labrador specimen: some, too, have the margins much incised. Why we do not find Botrychium boreale remains a mystery, but we still hope to place it in our Onondaga Flora.

MARY OLIVIA RUST.

SYRACUSE, N. Y., *Aug. 22nd.*

§ 342. **Habenaria peramœna,** Gray.—A single specimen of this handsome orchid has been brought to me from near Haddonfield, New Jersey. I have no knowledge of its having been detected in this part of the State before, and think it worthy of note.

The introduction of foreign plants in ballast deposits, both here and at Philadelphia, still continues. I have collected more new arrivals this year than for some time past. They are chiefly of species from Southern Europe, some from the African coast, and occasionally some from the West Indies and South America.

ISAAC C. MARTINDALE.

CAMDEN, N. J., *Aug.* 18.

§ 343. **Aspidium aculeatum,** Sw., var. **Braunii,** Koch.—New localities of this fern are being reported from time to time. In addition to the two in the Catskill mountains already known we have now another in the Bushnellsville Clove, sometimes called "Deep Hollow," on the road from Shandaken to Westkill, where it was collected on the 15th of August by Misses Mary and Caroline Redfield, of Pittsfield, Mass. This deep, rocky gorge, shut in by mountain walls, has the conditions under which this fern is usually found, and lies far back in the Catskills, on the boundary between Ulster and Greene counties, and not far from the border of Delaware Co., N. Y. The height of the clove is 1973 feet.

J. H. R.

§ 344. **Notes of a Botanical Excursion into North Carolina.**

The recent re-discovery of *Shortia* in North Carolina has created much interest among botanists. Dr. Gray, who first called attention to Michaux's original specimen and established the genus upon it, had long ago indicated the probability of finding it anew. Searches repeated in the course of many years had proved fruitless, so that to the botanical fraternity and particularly to the author of the genus the recovery was somewhat like that of a long-lost child. Desirous to see the plant *in situ*, he accepted the kind offer of Mr. M. E. Hyams to guide him to the spot, and two comrades of a former excursion, Messrs. Canby of Wilmington and Redfield of Philadelphia, with

another who was new to the region, Prof. C. S. Sargent of Boston, Director of the Arnold Arboretum, were included in the invitation. The object was not only to see *Shortia*, but to find more of it if possible, and to explore some portions of the mountains which the oldest member of the party had visited in 1841 and 1843. Moreover, the hurried autumnal visit to Roan Mountain, by Messrs. Gray, Engelmann, Canby and Redfield, in 1876, had inspired the whole party with a strong desire to take a more leisurely survey of this mountain in the season of Rhododendron-flowering. Certain ladies shared in this desire, and in a general longing for rough mountain travel. Their society added a zest to the expedition, their powers in mountaineering were the admiration of all beholders, and their zeal and helpfulness in plant-drying cannot be too highly extolled.

In the rapid flight by rail through Virginia only the most obvious botanical features could be noted. The forests passed through were largely of oaks and of *Pinus inops*. Occasional clumps of *Kalmia* were just coming into flower, and the evening air was redolent of the *Magnolia glauca* of the swamps. Entering North Carolina from Danville, the journey to Salisbury, and thence westerly to Statesville, was through the middle district of the State, a wide territory with topographical and botanical features differing much from those of the eastern sandy pine region on the one hand, and of the elevated valleys and still loftier mountain ridges of the western district on the other.

At Statesville was the first opportunity for herborizing. Here the party were received by Mr. Hyams and placed under the hospitalities of Mr. Wallace, the principal merchant of the town, who made them literally "at home" in his pleasant family, and furnished facilities for a close botanical examination of the vicinity. Under the guidance of Mr. Hyams they visited a pretty forest glen where was a lovely grove of young trees of *Magnolia macrophylla*. The gigantic cream-white flowers, odorous but not fragrant, were in full perfection, and one hardly knew whether the flowers or the enormous leaves with their glaucous bloom were most to be admired. In the more open glades were here first met the gay *Silene Virginica* and the delicate *Houstonia purpurea*, which afterwards so often presented themselves. In woods and copses *Clematis Viorna* and *Gonolobus hirsutus* were climbing, and near by were collected *Thaspium barbinode*, *Ligusticum actæifolium*, *Berberis Canadensis*,* *Asclepias variegata* and *Asarum arifolium*. In open pastures grew *Tetragonotheca helianthoides* and *Schrankia angustata*.†

* This native *Berberis* belongs to the mountains, mostly to those of Virginia. It was a surprise to us that Mr. Hyams had detected it here in the middle country. A. G.

† Want of time prevented an excursion to Lincolnton to search for *Darbya*, which the late Dr. Curtis found in the bend of the Little Catawba, not far from that town, on ground which is now mainly brought into cultivation. Only the male flowers of this rare shrub are known. Any botanist who can search for this plant in that region should put himself into communication with the venerable Dr. C. L. Hunter, of Lowesville, in Lincoln Co., who knows the locality. If no longer to be found there, the banks of the stream should be explored further down. The plant should also be sought in the country around Macon, Georgia. A. G.

A visit to the root and herb ware-house belonging to Wallace Brothers, and under the charge of Mr. Hyams, furnished evidence that this branch of industry has reached an extent and importance of which few are aware. The printed catalogue of indigenous plants, dealt in by this house, enumerates about 630 species, equal to the whole flora (less grasses and sedges) of a moderate district. These simples find a large market both in this country and Europe, and the orders come mainly from the wholesale druggists and the manufacturers of patent medicines. Think of a single order for *fifteen tons* of *Hepatica triloba!* The name *liver*-wort will suggest the object, and demonstrate the efficacy!

Joined by Mr. Hyams, the party proceeded by rail to the Swananoa Gap of the Blue Ridge, the present terminus of the Western Railroad of North Carolina. The road is built by the State, with convict labor, and is carried up this mountain pass by a series of curves and loops, on high embankments and through deep cuttings, finally piercing the ridge by a long tunnel, altogether forming a piece of engineering not surpassed by any similar work in this country. Soon the road will be completed through Asheville into Tennessee, and the lovers of the picturesque can find nowhere on the rail more striking scenery than they will here behold. A morning spent in rambling about this point revealed some of the features of the flora of the mountain district.* The *Azalea calendulacea* was here first seen, and its bright candles afterwards lighted up many a forest vista.

Calycanthus lævigatus was collected on the flanks of a wooded rocky eminence well named Rattlesnake Knob—two of these venomous reptiles falling victims to the club of Hyams. "What, locusts so early here!" cries one of the party, when the shrill music began. "Locusts in these parts means rattlesnakes," was the rejoinder of a more experienced member. The sounds seemed to come from a little distance to one side of the broken rocks on which we were standing; it was rather exciting to find that the pair of reptiles which gave the kind warning were among the stones almost under our feet.

Everywhere abounded *Galax aphylla; Tephrosia Virginiana* was frequent; and, on the rocky summit of the Knob, *Asplenium montanum* and *Asplenium Ruta-muraria* were found, but none of the rarer ferns. Returning to the eastern foot of the Gap, through the gorge in which the stage road passes, admiration was divided between the wild magnificence of the glen, and the rich and varied character of the trees which clothed its sides, and which were the special admiration of our arboriculturist. Conspicuous among the latter were *Liriodendron tulipifera*, *Magnolia Fraseri* and *Magnolia Umbrella* along with a few noble hemlocks and the silver-leaf linden. Among the shrubs were two or three species of *Cratægus*, *Symplocos tinctoria*, *Halesia tetraptera* and *Ilex mollis*. Of the more humble plants were *Menispermum Canadense*, *Astilbe decandra* and *Galium latifolium*. To the disappointment of all, the *Rhododendron maximum* this year withheld

* The height of Swananoa Gap is 2,657 feet above tide. Rattlesnake Knob is probably nearly 3,500 feet high.

its wonted display, most of the flower-buds having been blasted by the severe cold winds at the end of the previous winter. This proved to be the case in all the region visited.

Being now in McDowell County, the Shortia locality was visited, under the guidance of Mr. George M. Hyams, the actual discoverer. In the secluded and well-protected station, well overshadowed by Rhododendron and Magnolias, was seen the little colony of the plant so long sought, and by many so long doubted*. Its companions were *Mitchella repens*, *Asarum Virginicum* and *Galax aphylla*. The space over which the plant extended was perhaps 10 feet by 30, and in all there may have been from 50 to 100 plants. As the plant multiplies by stolons, it is remarkable that its area should be thus restricted. And since in the struggle for life, of two allied plants the weaker "must go," Dr. Gray suggested the probability that its stronger cousin, the *Galax*, had crowded out the *Shortia*. And here indeed, in what may be the last foothold of the rarity, *Galax* appeared to be actually doing so. Yet the plants, though comparatively few, were vigorous and healthy. Other stations may be looked for; but they must be hard to find. When we consider the long search which has been made for this plant, how all the mountain region of the Carolinas and Tennessee has been examined by the sharp optics of Buckley, Rugel, M. A. Curtis, Dr. Gray, Canby, Leroy and Ruger, the Vasey's, elder and younger, Chickering and others, it is very certain that if there be other localities they must be "few and far between."

In June even the fruit of this vernal plant had mainly gone by; but Dr. Gray secured a capsule or two with some seeds.†

At the Shortia station *Azalea arborescens* was observed in bloom; but much of it was afterwards seen throughout the mountains. At first sight it might be mistaken for *A. viscosa*, which is also common in the region. But it blooms earlier, has a larger corolla with longer tube, and in the drying an excellent character manifests itself in the vanilla-like scent of the leaves.‡

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* We cannot always trust too confidently to tickets, which may be written subsequently and based on imperfect memory. Michaux's *Woodwardia Banisteriana* —which from his description and citation of Plukenet's figure must be *Woodwardia Virginica*—is ascribed by Michaux to "montibus Carolinæ," where it has never since been found, while it is well known to abound in the swamps of the lower district.

† These confirm the character of the genus, having a close-fitting seed-coat, just as described in the original character, drawn from a single seed which was found in an open capsule of Michaux's specimen, and was destroyed in the autopsy. A good figure of *Shortia galacifolia* with a detailed account of the genus and order, by the present writer, is contained in the seventh volume, 6th series, of the Annales des Sciences Naturelles. Since its publication a flower of *S. uniflora* (kindly sent by Dr. Maximowicx) has been examined. Its anthers show indications of being inflexed on the apex of the filament in the manner of the American plant, leaving hardly anything but the shape of the leaf to distinguish the two species. A. G.

‡ It is open to question whether this shrub, which we have called *Azalea* or *Rhododendron arborescens*, is actually Pursh's species. He mentions its "large, abundant, rose-colored flowers," but in ours these are white, or with only the slight roseate tinge which *A. viscosa* also has. And the habitat given is "On rivulets near the Blue Mountains, Pennsylvania;" also in John Bartram's garden. Bartram, however, may have brought it from the southern Alleghanies. And Pursh was notoriously untrustworthy as to localities, appending his *v. v*, to plants from districts he can never have visited. A. G.

At Morganton the party was completed by the addition of Mrs. Gray, her brother, and his two daughters—the lay members of the expedition, but sharers in all botanical labors. One day served for the needful preparation and for a little botanizing on the banks of the Catawba, and on the morning of the 11th of June the expedition moved toward Table Rock with all its equipments. Four of the party on horses led the way. A one-horse buggy, which proved admirably adapted to rough roads, conveyed two. A three-seated waggon with a pair of mules, driven by Jeff,—a greyheaded mulatto and an admirable driver—assisted by his boy, took the remainder, which included Mr. Hyams and his boy Fred, a lad of eleven or twelve, whose knowledge of botany already nearly equalled that of his father. Another rough country wagon, drawn by mules and driven by a white man, conveyed the baggage and brought up the rear.

Just before sunset the house nearest Table Rock was reached, that of Mr. Sisk, who is accustomed to entertain visitors and guide them to the summit, where his field lecture upon the geology of the region, and upon cosmogony in general, forms a part of the entertainment. And here be it noted that a shower after we were housed, and another while equally housed for the mid-day meal, and a third on a subsequent afternoon, requiring an hour's halt, comprise all the rain which the expedition encountered; although the region is generally showery in summer.

On the 12th was made the ascent of Table Rock, a most remarkable summit, belonging to the Blue Ridge system, presenting in one direction the tabular profile which gives it its name, and from another a sharp conical outline not unlike that of the Matterhorn.* The botanists returned from it laden with plants, and it was curious to see among them so many of the species which are associated with the sandy barrens and swamps of southern New Jersey, such, for instance, as *Xerophyllum asphodelioides*, *Leiophyllum buxifolium*, *Amianthium muscætoxicum* and *Hudsonia montana*, the last indeed a species peculiar to Table Rock, but closely allied to the *H. ericoides* of New Jersey. *Rhododendron punctatum* was collected on the summit, though not in flower, also *Menziesia globularis*. *Scirpus cæspitosus* was there, true to its preferences. *Vaccinium corymbosum* var. *pallidum* was common here and at other points among the mountains. *Galax aphylla*, now just in flower, abounded here and throughout the mountain forests, and its glossy circular leaves and slender spikes of white flowers make it one of the most charming of the woodland plants.

A drive of a dozen miles the same afternoon brought us—the first guests of the season—to a large and comfortable house of entertainment, at Piedmont Springs, charmingly situated near the head of a picturesque deep valley. Both host and hostess were remarkable for their height,—their charges for their lowness.

Long as June days are, and short as a journey of 13 or 14 miles might seem to be, the next day was none too long to bring the party

* Its height is 3,918 feet above tide-water, according to Prof. Kerr, the State Geologist. It commands a magnificent view.

over Jonas' Ridge (a part of the Blue Ridge) and to Franklin's, a farm house near Linville Falls. This is hardly the place to recount the adventures of the day—the roughness of the road, remarkable even for these mountains,—the wayside lunch—the break down of the baggage-wagon—how Canby "put his foot in" a nest of —— "moonshiners," to the equal trepidation of the discoverer and the discovered, and the rapid making of tracks by both—how the faithful Jeff was left to pass the night alone upon the mountain-side in charge of mules and baggage—and how the party with much ado succeeded in reaching their destination after night-fall. At sunset the culminating point of Jonas' Ridge, free from trees and at a height of not far from 4,000 feet, afforded a view of almost unequalled extent and magnificence, in which the Black Mountain and Grandfather predominated, and under the lee of some rocks the first specimens were collected of *Vaccinium erythrocarpon* and *Saxifraga Careyana*. The plants noticed during this day and the next were *Azalea calendulacea*, *Menziesia globularis*, *Calycanthus lævigatus*, *Boykinia aconitifolia*, *Lonicera flava*, *Zizia integerrima*, *Phlox glaberrima*, *Asarum Virginicum*, *Pogonia divaricata*, *Calopogon pulchellum*, *and Clintonia umbellata*. In the gorge at the Falls the best specimens of *Asplenium montanum* were found. Here too *Rhododendron Catawbiense* was found growing mixed with *R. maximum* and equally tall, reaching the height of 12 or 15 feet, and here already dropping its corollas before the middle of June. This caused forebodings (not, however, to be realized) that we might be too late for the floral display of this species on Roan Mountain, where it reigns supreme.*

Linville Falls are worth visiting, and are readily accessible from the south, by the Linville mountain road; but both the Falls and the botanizing fell below our expectations.

It was hoped that *Shortia* might be found on the Linville; but all search was in vain. To increase the chances, now that we were on Michaux's track (as shown by his diary), Messrs. Canby and Sargent, on horseback, made a two days excursion down the North Cove, and up Turkey Creek, and over to the upper waters of the south fork of Toe River, and thence to Bakerville; while the rest of the party came directly to the north fork of the Toe and so by the nearest wagon road to Bakerville. Yet nothing was seen of *Shortia*.† Plenty of *Azalea arborescens* was met with of a size to justify the specific name,—shrubs of 15 feet in height, on stems two or three inches

* Our own observations would restrict *Rhododendron Catawbiense* to the tops of the higher mountains, or to some such peculiar station as this at Linville Falls at somewhat lower elevations. But Mr. Howard Shriver pointed out to me a locality at the foot of the low mountains which rise behind Wytheville in Virginia; and, what is truly extraordinary, Prof F. W. Symonds, of the University of North Carolina, sends specimens, in full bloom on the third of April, on a steep and shaded bank on Morgan's Creek, near Chapel Hill, in the middle upper country of the State, flourishing at an elevation of only 500 feet above the level of the sea! A. G.

† The best hopes of the rediscovery of Michaux's habitat, in my opinion, are concentrated upon that portion of the Blue Ridge which directly flanks the Black Mountain ranges, and upon the eastern face of the latter from Swananoa Gap northward. A. G.

in diameter, and laden with the large and beautiful blossoms. It particularly affects the rocky and wooded banks of water courses, the spreading spray overhanging the stream. Both routes were made glorious, also, by endless displays of *Azalea calendulacea* and of *Kalmia*, both in their prime, backed by a wealth of greenery, and offering to our admiration varied hues and new combinations at every turn.*

Roan Mountain, which the main party reached on the 16th, and the detachment the following day, rises upon the boundary between North Carolina and Tennessee. It reaches a height of 6,306 feet according to Guyot's measurement. Though inferior in elevation to many of the wooded peaks of the Black Mountains and of the Smoky Range, its ample and varied summit is bare of trees, and for that reason the more attractive to botanists as well as to lovers of mountain views. Dr. Gray visited it in 1841 and again, with a portion of the present party, in 1876. The observations made by him on his first visit are recorded in *Am. Jour. Science*, 1st ser. Vol. XLII., pp. 1–49. (Oct., 1841). Other botanists have since visited it, and its flora has been pretty well explored. Good carriage roads to the summit from each side have now made it very accessible, and a comfortable, well-kept hotel has been established upon it, so that henceforth it will be a popular resort. Dr. Gray has well said that it is the most *beautiful* mountain east of the Rockies. It has not the stern desolation of Mt. Washington's shattered dome, but instead presents a grassy park of hundreds of acres, studded with copses of the brilliant *Rhododendron Catawbiense*. When the party reached the summit, this lovely shrub, in countless numbers, was just opening its crimson and rosy flowers, and surely no floral display could be richer. Beneath the rhododendrons, and also in the crevices of the rocky ledges, were rich cushions studded with the white stars of *Leiophyllum buxifolium*, of a variety which, from its depressed and compact growth, Dr. Gray has called *prostratum*. The natives call it mountain heather. The grassy sward was blue with large patches of *Houstonia serpyllifolia*, of more decided color and forming larger mats than our own *cærulea*. Upon the higher ledges at the east and west ends of the mountain were found *Geum radiatum* just coming into flower and, sparingly, *Geum geniculatum*. A stunted and very pretty variety of *Houstonia purpurea* was common in exposed stony places, and on the precipitous cliffs below the bluff grew *Sedum Rhodiola*. On the rocky ledges on the brow of the mountain were collected *Saxifraga leucanthemifolia* (hardly yet in flower,) *Carex juncea*, *Carex canescens*, var. *vitilis*, *Menziesia globularis*, and *Vaccinicum erythrocarpon* with its curious revolute corolla—a cranberry-blossom upon a whortle-berry bush! *Potentilla tridentata* on the open rocks, and *Clintonia borealis* with *Oxalis Acetosella* growing in the shade of the balsams reminded one of the mountains of New England and New York, and so did *Maianthemum Canadense* in the mossy cushions

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* *Euphorbia Darlingtonii* seems to abound on the western slopes of the Blue Ridge all the way to Virginia, and is especially prevalent in Ashe Co.

A. G.

under the Rhododendrons. *Veratrum viride* and *Alnus viridis* mark the gullies. Much of the summit prairie flora has doubtless been destroyed by the large herds of cattle, horses, and sheep, which are every summer sent to the mountain top for pasture. Canby and Sargent rejoined the party upon the mountain on the 17th, and several days were then devoted to excursions in various directions upon the summit and flanks of the ridge. In these excursions were collected *Trautvetteria palmata*, *Thalictrum clavatum*, (abundant on the flanks of the mountain), *Diphylleia cymosa*, *Ilex monticola*, *Saxifraga Careyana* (growing in the shade of overhanging rocks,) *Ribes rotundifolium*, *Sedum ternatum*, *Sambucus pubens*, *Diervilla trifida*, (but not *D.*; *sesilifolia*), *Phacelia fimbriata* (an exquisite little species allied to the *P. Purshii* of the western States), *Castilleia coccinea*, *Streptopus amplexifolius*, *Streptopus roseus* and *Paronychia argyrocoma*, the latter upon the rocks at Eagle Cliff.

Many very interesting species were collected upon the southern flank of the mountain, in and below the belt of *Abies Fraseri*. Near springs and rills, not far below the summit, *Cardamine Clematitis* abounds. This species was many years ago collected by Rugel in the Smoky Mountains, and was sent by him to Shuttleworth, who distributed it under the above name. It is enumerated in Watson's Index, but has not been described.* Other plants collected on this slope were *Saxifraga erosa* (abundant in wet places), a single plant of the rare *Aconitum reclinatum*, not yet in flower, and a lily which Watson has recently named *Lilium Grayi*, probably too near to *L. Canadense*.

Of the arboreal vegetation, the *Abies Fraseri* mixed with *A. alba* reach the highest, comprising most of the forest above 5500 feet. These trees clothing all the summits of the Black Mountains doubtless suggested their name, their hue at a distance being dark and sombre. There is some reason to believe that this forest has been encroaching upon the bald portion of the summit, but as it is now being largely cut for fire-wood and fencing, any such encroachment is likely to be checked, perhaps too effectually. Below the firs the deciduous trees begin with *Acer spicatum*, *Cratægus tomentosa*, var.

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* This desideratum may here be supplied.

CARDAMINE CLEMATITIS, Shuttleworth in coll. distrib. Rugel. Species distinctissima, glaberrima, semi-subpedalis e rhizomate tenero ; foliis radicalibus primariis reniformibus subintegris, cæteris trisectis (segmentis rotundatis nunc angulatis, terminali majori reniformi-cordato seu angulato-trilobo) vel supremis oblongatis trilobis, petiolo basi dilatata insigniter sagittato-appendiculato, auriculis subulatis ; racemo brevi laxo ; petalis albis (lin. 3 longis) calyce plus duplo longioribus ; siliqna angusto-lineari compressa in stylum sat longum attenuata ; stigmate parvo.—Wet ground along streamlets in the higher Iron or Smoky Mountains of North Carolina and Tennessee, collected in 1844 by Rugel, and about the same time by Buckley. A specimen from Buckley was by me confounded with *C. rotundifolia*, and is the only authority we know of for attributing to that species occasionally trisected leaves, as is done in the Manual of the Botany of the Northern States. An imperfect original specimen from Shuttleworth was mixed up with a Florida species, intermediate between *Cardamine* and *Nasturtium*, first received from Leavenworth without fruit, and referred in the Supplement to the first volume of Torrey & Gray's Flora to *N. officinale* ; it was afterwards received from Buckley, then from Shuttleworth (coll. Rugel), first as *Cardamine curvisiliqua*, Shuttl., and again as *Nasturtium stylosum*, Shuttl. *Proc. Am. Acad. xx.* 45. A. G.

punctata, beech, yellow and black birches, buck-eye, and soon upon the rich soil of the mountain side come large trees of *Prunus serotina*, with sugar maples, chestnut, both the lindens, white and red oaks, hickories, cucumber trees, tulip tree, and all the trees which compose the magnificent forest of the southern Alleghanies.

All too soon, on the 21st, the pleasant companionship was broken up. Dr. and Mrs. Gray, having accepted the kind invitation of Mr. Arthur Cowles to visit some points in Ashe Co., which were explored by Dr. Gray in his first visit of 1841, left in company with him, for a three days drive to his home at Deep Gap, and two or three more to the railroad at Marion, Virginia. Prof. Sargent and Mr. Canby, with Mr. Loring and family, descended the northern side of the mountain the same day to Wilder's Forge, and thence over the Iron Mountain to Johnson City; and Mr. Redfield followed a day or two later. In the descent were noticed on the lower flanks of the mountain, *Azalea calendulacea*, *Habenaria pscycodes* and *Asclepias phytolaccoides*. In crossing the Iron Mountain range were seen *Diphylleia cymosa*, *Astilbe decandra*, and *Cardamine rotundifolia*. *Aristolochia Sipho* frequently displayed its pyramids of huge cordate leaves. Several species of *Magnolia* abounded in the gorges of the Iron Mountains, and there were sufficient indications that a thorough exploration of that range would yield a botanical harvest. Among the limestone rocks a few miles east of Johnson City (a locality noticed in 1876) was collected *Asplenium parvulum*, associated with *Camptosorus rhizophyllus*.

At Jefferson, the county seat of Ashe County, Dr. Gray made a hurried ascent of Negro Mountain, which rises close to the village. True to his recollection of 1841, he went directly to the point where he then discovered *Aconitum reclinatum*, and found it, but not yet in flower. Roots were taken for cultivation in the Botanic Garden at Cambridge. There he also collected *Saxifraga Caroliniana*, but not *S. Careyana*, which alone was found further south. A fresh comparison of the two very similar plants confirmed the published characters of the species. J. H. R.

NOTES ON CYPERUS, L. by N. L. Britton.

§ 345. **Cyperus cylindricus.**—(Mariscus cylindricus, Ell.; Cyperus ovularis, Torr., *Var.* cylindricus, Torr.)

Culms 6 in. to 20 in. high, smooth, triangular; leaves linear, roughish on the margins especially near the apex; involucre of about 6 very unequal rays, rough on the edges; umbel about 7 rayed; rays ½ in. to 2½ in. long; heads cylindrical, or sometimes oblong, of numerous linear spikes, the lower of which are somewhat reflexed; spikes usually 2-flowered, the two lower scales empty; scales ovate, obtusish; achenium linear-obvate, or linear oblong, triangular, shorter than the scale; styles trifid; stamens three. Roots fibrous, from clustered tubers. Very distinct from C. ovularis, Torr., with which it has been confounded.

Abundant in the Pine Barrens of New Jersey; Coney Island; Tottenville, S. I.; Gravesend and Rockaway (W. H. Leggett);